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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/569,954

02/28/2006

Roberto Catelli

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209 Madison Street
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ALEXANDRIA, VA 22314

EXAMINER

MANOHARAN, VIRGINIA

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

06/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/569,954	Applicant(s) CATELLI, ROBERTO	
	Examiner Virginia Manoharan	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/28/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors, e.g., typographical, grammar, idiomatic, syntax and etc. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

The abstract of the disclosure is objected to because of the inclusion of legal phraseology often used in patent claims such as "comprises" in line 10. Correction is required. See MPEP § 608.01(b).

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s), for example, (3) claimed in claim 1, line 5, mentioned in the description.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of

any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a). The claims, as framed, are functional to the point of being indefinite inasmuch as the process steps languages and the functional languages make the actual structure vague and the true structural limitations for apparatus claims, are difficult to determine. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device.

b). It is unclear whether the “a successive sector” in claim 1, line 19, the same or different from the initially recited “ a plurality of sectors” in claim 1, line 16?

c). The addition of the terms “of known type”, numerous recited in the claims, renders an otherwise definite expressions indefinite at it extends the scope of the expression. Ex parte Copenhaver, 109 USPTO 118 Bd (1955). Also, it provides for confusion and ambiguity as to what applicant is claiming as his invention.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1797

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1 is rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over anyone of Applicant's Disclosure of Admitted Prior Art, Sephton (6,309,513) or GB 686 375.

Anyone of the above references is deemed to anticipates or renders obvious the features of the apparatus as claimed in claim 1.

Applicant admits, for example, at the paragraph bridging pages 1-2 that a "... prior art contains falling film concentration plants which comprise an evaporator provided with a vertical tube bundle in which a plurality of tubes is arranged, ends of which are keyed on two parallel plates, respectively an upper plate and a lower plate, so that the upper ends of the tubes open into an inlet zone of the product, while the lower ends of the tubes open into a bottom zone of the evaporator, known as the separation chamber, in which the juice loses water by self-evaporation (flash), cools, and exits to be sent on to successive operations. The tubes are closed in a sleeve, generally cylindrical and delimited by the two parallel plates, internally of which a heating fluid circulates, which is generally steam produced by a boiler and subsequently laminated by special valves which reduce pressure and temperature thereof in order to bring the values up to the desired ones. In this way the external surface of the tubes is struck by the heating fluid, while their internal surfaces are occupied by a falling film of product, which, as it heats up, loses water in the form of steam and therefore becomes concentrated. In these

plants the tube bundle is often divided into two or more sectors which are all closed within the sleeve of the evaporator and are thus all working at the same temperature. In this case the product which falls from the first section of tubes and arrives at the separation chamber is returned to the top of the tube bundle through a return tube arranged internally of the tube bundle; during its upward return the product, which had cooled in the separation chamber due to evaporation, is heated once more, although it is normally at a slightly lower temperature than the saturation temperature internally of the chamber; once it has reached to top of the evaporator the product is made to fall in the following sectors. The product is then extracted from the separation chamber, once it has passed through the final section..” See also Figs 1-6 of GB 375; and Fig. 1A of Septon.

Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over over anyone of Applicant's Disclosure of Admitted Prior Art, Sephton (6,309,513) or GB 686 375 in view of GB 17145 or GB 937, 623.

To incorporate the compressor (12), steam turbine (18) and steam ejector (40) taught e.g, by GB ‘623 to the apparatus of anyone of the above references would have been obvious to one of ordinary skill in the art as they known elements of an evaporating apparatus used for their art –recognized functions. In this regards, see further page 1, lines 11- 37 of GB ‘145 disclosing similar structural features as GB ‘623. Septon and GB '375 both suggest utilizing said compressor system in their apparatuses.

Claim 4 does not define any structure and accordingly cannot be distinguished from the prior art in the structural sense.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nishimura et al discloses a distillation column equipped with a vertical- multitube reboiler.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to V. Manoharan whose telephone number is (571) 272-1450.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Virginia Manoharan/
Primary Examiner, Art Unit 1797

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